Applicant: SHOWA CORPORATION

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## **REMARKS**

Claims 1-10 are pending in the present application. Claims 1 and 2 have been amended.

Claims 3, 7, and 9 were rejected under 35 USC §112, second paragraph as being indefinite. Claim 1 has been amended to include an additional limitation. A "projection" in claim 1 provides antecedent basis for "the projection" in claims 3, 7 and 9. These claims are definite.

Claims 1, 3, 5, 7, and 9 were rejected under 35 USC §102(e) as being anticipated by US Patent No. 6672436 (*Keil*). Claim 1 is a bottom valve apparatus with numerous limitations including that "the inner peripheral edge of the aperture [of the check valve] has a smaller diameter than an outer diameter of the projection" of the fixing member. The fixing member of *Keil* is a nut and bolt. The inner peripheral edge of the bore of the valve disk of *Keil* is larger than the outer peripheral edge of the bottom projection of the nut. See, e.g. Figs 3 and 4 of *Keil*. Thus, *Keil* does not teach or suggest a bottom valve with all the limitations of claim 1. Claim 1 and claims 2-10 that depend therefrom are thus patentable.

Claims 2, 4, 6, 8 and 10 were rejected under 35 USC §103(a) as being unpatentable over *Keil* in view of US Patent No. 3321051 (*Heckethorn*). Claims 2, 4, 6, 8, and 10 depend from claim 1 and thus have all the limitations of claim 1. As discussed above, *Keil* does not teach or suggest a bottom valve with all the limitations of claim 1. *Heckethorn* does not make up the deficiencies in *Keil*. Thus, claims 2, 4, 6, 8 and 10 are not taught or suggested by the prior art of record and is patentable.

## **CONCLUSION**

Applicant asserts that all of the objections have been obviated and, therefore now respectfully requests withdrawal of the objections, and allowance of the application.

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